

In the Claims:

Claims 1-4 (canceled)

Claim 5. (currently amended) A method for controlling a cooling fan unit of a vehicle, the cooling fan unit including at least one cooling fan, the method comprising:

detecting a plurality of vehicle parameters including a coolant temperature and a vehicle speed;

determining a driving load of the cooling fan unit corresponding to the vehicle parameters on the basis of a plurality of temperature ranges of the coolant temperature and a plurality of speed ranges of the vehicle speed,

the plurality of temperature ranges formed by at least one reference temperature selected from a plurality of predetermined temperatures,

the plurality of speed ranges formed by at least one reference speed selected from a plurality of predetermined speeds, and

the driving load being selectively determined from a plurality of predetermined loads; and

operating the cooling fan unit at the determined driving load, ~~The method of claim 3,~~ wherein, wherein:

the vehicle is equipped with an air conditioning system including an air/con switch;

the at least one reference temperature and the at least one reference speed are selected on the basis of an on/off state of the air/con switch; and

in the case in which the air/con switch is off, ~~the determining~~ the driving load of the cooling fan unit is determined ~~determines the driving load~~ as:

a smallest one of the predetermined loads when the coolant temperature lies in a first temperature range less than a first reference temperature;

a load depending on comparison of the vehicle speed and a first reference speed when the coolant temperature lies in a second temperature range greater than or equal to the

first reference temperature and less than a second reference temperature;

a load depending on comparison of the vehicle speed and a second reference speed when the coolant temperature lies in a third temperature range greater than or equal to the second reference temperature and less than a third reference temperature; and

a largest one of the predetermined loads when the coolant temperature lies in a fourth temperature range greater than or equal to the third reference temperature.

Claim 6. (original) The method of claim 5, wherein:

the first reference temperature is less than 100°C; and

the second reference temperature and the third reference temperature are greater than 100°C.

Claim 7. (original) The method of claim 5, wherein the first reference speed is smaller than the second reference speed.

Claim 8. (currently amended) A method for controlling a cooling fan unit of a vehicle, the cooling fan unit including at least one cooling fan, the method comprising:

detecting a plurality of vehicle parameters including a coolant temperature and a vehicle speed;

determining a driving load of the cooling fan unit corresponding to the vehicle parameters on the basis of a plurality of temperature ranges of the coolant temperature and a plurality of speed ranges of the vehicle speed,

the plurality of temperature ranges formed by at least one reference temperature selected from a plurality of predetermined temperatures,

the plurality of speed ranges formed by at least one reference speed selected from a plurality of predetermined speeds, and

the driving load being selectively determined from a plurality of

predetermined loads; and

operating the cooling fan unit at the determined driving load. ~~The method of claim 4,~~
~~wherein, wherein:~~

the vehicle is equipped with an air conditioning system including an air/con switch;

the at least one reference temperature and the at least one reference speed are
selected on the basis of an on/off state of the air/con switch and a refrigerant pressure in the
air conditioning system; and

in the case in which the air/con switch is on and the refrigerant pressure lies in a range less than a first predetermined pressure and greater than or equal to a second predetermined pressure, ~~the determining the driving load of the cooling fan unit~~ is determined ~~determines the driving load as:~~

a smallest one of the predetermined loads when the coolant temperature lies in a first temperature range less than a first reference temperature;

a load depending on comparison of the vehicle speed and a first reference speed when the coolant temperature lies in a second temperature range greater than or equal to the first reference temperature and less than a second reference temperature;

a load depending on comparison of the vehicle speed and a second reference speed when the coolant temperature lies in a third temperature range greater than or equal to the second reference temperature and less than a third reference temperature; and

a largest one of the predetermined loads when the coolant temperature lies in a fourth temperature range greater than or equal to the third reference temperature.

Claim 9. (original) The method of claim 8, wherein:

the first reference temperature is less than 0°C;

the second reference temperature is greater than or equal to 0°C and less than 100°C;

and

the third reference temperature is greater than 100°C.

Claim 10. (original) The method of claim 8, wherein the first reference speed is greater than the second reference speed.

Claim 11. (currently amended) A method for controlling a cooling fan unit of a vehicle, the cooling fan unit including at least one cooling fan, the method comprising:

detecting a plurality of vehicle parameters including a coolant temperature and a vehicle speed;

determining a driving load of the cooling fan unit corresponding to the vehicle parameters on the basis of a plurality of temperature ranges of the coolant temperature and a plurality of speed ranges of the vehicle speed,

the plurality of temperature ranges formed by at least one reference temperature selected from a plurality of predetermined temperatures,

the plurality of speed ranges formed by at least one reference speed selected from a plurality of predetermined speeds, and

the driving load being selectively determined from a plurality of predetermined loads; and

operating the cooling fan unit at the determined driving load. ~~The method of claim 4,~~
~~wherein, wherein:~~

the vehicle is equipped with an air conditioning system including an air/con switch;

the at least one reference temperature and the at least one reference speed are selected on the basis of an on/off state of the air/con switch and a refrigerant pressure in the air conditioning system; and

in the case in which the air/con switch is on and the refrigerant pressure is less than a predetermined pressure, the determining the driving load of the cooling fan unit is determined determines the driving load as:

a smallest one of the predetermined loads when the coolant temperature lies in a first temperature range less than a first reference temperature;

a load depending on comparison of the vehicle speed and a first reference speed

when the coolant temperature lies in a second temperature range greater than or equal to the first reference temperature and less than a second reference temperature; and

a largest one of the predetermined loads when the coolant temperature lies in a third temperature range greater than or equal to the second reference temperature.

Claim 12. (original) The method of claim 11, wherein:

the first reference temperature is less than 0°C; and

the second reference temperature is greater than 100°C.

Claim 13. (currently amended) A method for controlling a cooling fan unit of a vehicle, the cooling fan unit including at least one cooling fan, the method comprising:

detecting a plurality of vehicle parameters including a coolant temperature and a vehicle speed;

determining a driving load of the cooling fan unit corresponding to the vehicle parameters on the basis of a plurality of temperature ranges of the coolant temperature and a plurality of speed ranges of the vehicle speed,

the plurality of temperature ranges formed by at least one reference temperature selected from a plurality of predetermined temperatures,

the plurality of speed ranges formed by at least one reference speed selected from a plurality of predetermined speeds, and

the driving load being selectively determined from a plurality of predetermined loads; and

operating the cooling fan unit at the determined driving load. ~~The method of claim 4,~~
~~wherein,~~ wherein:

the vehicle is equipped with an air conditioning system including an air/con switch;

the at least one reference temperature and the at least one reference speed are selected on the basis of an on/off state of the air/con switch and a refrigerant pressure in the air conditioning system; and

in the case in which the air/con switch is on and the refrigerant pressure is greater than or equal to a predetermined pressure, ~~the determining~~ the driving load of the cooling fan unit is determined ~~determines the driving load~~ as:

a smallest one of the predetermined loads when the coolant temperature is less than a first reference temperature; and

a largest one of the predetermined loads when the coolant temperature is greater than or equal to the first reference temperature.

Claim 14. (original) The method of claim 13, wherein the reference temperature is less than 0°C.

Claim 15. (canceled)

Claim 16. (currently amended) A method for controlling a cooling fan unit of a vehicle, the cooling fan unit including at least one cooling fan, the method comprising:

detecting a plurality of vehicle parameters including a coolant temperature and a vehicle speed;

determining a driving load of the cooling fan unit corresponding to the vehicle parameters on the basis of a plurality of temperature ranges of the coolant temperature and a plurality of speed ranges of the vehicle speed,

the plurality of temperature ranges formed by at least one reference temperature selected from a plurality of predetermined temperatures,

the plurality of speed ranges formed by at least one reference speed selected from a plurality of predetermined speeds, and

the driving load being selectively determined from a plurality of predetermined loads; and

operating the cooling fan unit at the determined driving load,~~The method of claim 15,~~
~~wherein,~~ wherein:

the at least one reference temperature and the at least one reference speed are selected on the basis of whether the vehicle is equipped with an air conditioning system; and
in the case in which the vehicle is not equipped with an air conditioning system, the ~~determining the driving load of the cooling fan unit is determined~~ determines the driving load as:

a smallest one of the predetermined loads when the coolant temperature lies in a first temperature range less than a first reference temperature;

a load depending on comparison of the vehicle speed and a first reference speed when the coolant temperature lies in a second temperature range greater than or equal to the first reference temperature and less than a second reference temperature; and

a largest one of the predetermined loads when the coolant temperature lies in a third temperature range greater than or equal to the second reference temperature.

Claim 17. (currently amended) A method for controlling a cooling fan unit of a vehicle, the cooling fan unit including at least one cooling fan, the method comprising:

detecting a plurality of vehicle parameters including a coolant temperature and a vehicle speed;

determining a driving load of the cooling fan unit corresponding to the vehicle parameters on the basis of a plurality of temperature ranges of the coolant temperature and a plurality of speed ranges of the vehicle speed,

the plurality of temperature ranges formed by at least one reference temperature selected from a plurality of predetermined temperatures,

the plurality of speed ranges formed by at least one reference speed selected from a plurality of predetermined speeds, and

the driving load being selectively determined from a plurality of predetermined loads;

operating the cooling fan unit at the determined driving load; and ~~The method of~~

~~claim 2, further comprising~~

determining whether a detected vehicle parameter is abnormal,
wherein the ~~determining the driving load of the cooling fan unit~~ is determined
~~determines the driving load~~ on the basis of whether a vehicle parameter is abnormal and
which vehicle parameter is abnormal.

Claim 18. (original) The method of claim 17, wherein, in the case in which the vehicle speed is abnormal, the determining the driving load of the cooling fan unit determines the driving load using a value less than the first predetermined speed as the vehicle speed.

Claim 19. (original) The method of claim 17, wherein, in the case in which the coolant temperature is abnormal, the determining the driving load of the cooling fan unit determines the driving load as the largest one of the predetermined loads.

Claim 20. (original) The method of claim 17, wherein the vehicle is equipped with an air conditioning system including an air/con switch and the vehicle parameter further comprises a refrigerant pressure of the air conditioning system,
wherein, in the case in which the refrigerant pressure is abnormal, the determining the driving load of the cooling fan unit determines the driving load as:

a smallest one of the predetermined loads when the coolant temperature lies in a first temperature range less than a first reference temperature;

a load depending on comparison of the vehicle speed and a first reference speed when the coolant temperature lies in a second temperature range greater than or equal to the first reference temperature and less than a second reference temperature;

a load depending on comparison of the vehicle speed and a second reference speed when the coolant temperature lies in a third temperature range greater than or equal to the second reference temperature and less than a third reference temperature; and

a largest one of the predetermined loads when the coolant temperature lies in a fourth

temperature range greater than or equal to the third reference temperature.

Claim 21. (canceled)